IN THE SPECIFICATION

Please amend p. 1, paragraph [0003] of the specification as follows:

[0003] Accordingly, techniques have been developed to improve the quality of tone reproduction. Two types of approaches are currently utilized: global mapping and local adaptive tone correction. Global mapping is a relatively straight-forward algorithm. However, its effectiveness is limited when applied to digital images that possess a high dynamic range. Local adaptive methods are generally utilized to enhance the tone reproduction of digital images that exhibit high dynamic ranges. Local adaptive algorithms seek to change a scaling factor based on local image features. For example, ~~Chie~~ Chiu et al. proposed a non-uniform scaling function for rendering high dynamic range computer graphics in "Spatially non-uniform scaling functions for high contrasts images," *Proceedings of Graphics Interface* '93, 1993. Moroney disclosed an image mask based tone correction algorithm for digital photographs in "Local color correction using non-linear masking," *IS&T SID 8th Color Imaging Conference,* 2000. Although these algorithms are based on research of human eye behaviors, these algorithms produce noticeable gradient reversals known as a "halo effect."

Please amend p. 6, paragraph [0024] of the specification as follows:

[0024] To describe the low-pass filtering operation in greater detail, it is appropriate to reiterate several terms and to define several new terms. As previously noted, $I(x,y)$ represents grayscale image 102 and $R(x,y)$ represents the segmentation result. Let $w(x,y)$ represent a two-dimensional low-pass filter kernel. $N(x,y)$ denotes the support of the lowpass filter (i.e. it defines the area over which the low-pass filter will operate for a particular pixel (x,y)). For each pixel (x_0,y_0), its neighborhood may be

classified into two groups: a peer group defined as:

$$N_p(x_o,y_o) = \{ (x,y) \mid R(x,y) = R(x_o,y_o) \text{ and } R(x,y) \in N(x_o,y_o)\}$$

and a non-peer group defined as:

$$N_n(x_o,y_o) = \{ (x,y) \mid R(x,y) \neq R(x_o,y_o) \text{ and } R(x,y) \in N(x_o,y_o) \}$$

Please amend p. 6, paragraph [0025] of the specification and the equations following as follows:

[0025] The average grayscale value is calculated over these groups respectively as:

$$I_p(x, y) = \frac{\sum_{(x,y)\in Np(x_0,y_0)} I(x, y) \cdot w(x - x_0, y - y_0)}{\sum_{(x,y)\in Np(x_0,y_0)} w(x - x_0, y - y_0)}$$

$$I_n(x, y) = \frac{\sum_{(x,y)\in Nn(x_0,y_0)} I(x, y) \cdot w(x - x_0, y - y_0)}{\sum_{(x,y)\in Nn(x_0,y_0)} w(x - x_0, y - y_0)}$$

Please amend p. 7, paragraphs [0027] and [0028] of the specification as follows:

[0027] The contribution of the non-peer group $I_n(x,y)$ to the filtering result is then determined by:

$$diff(x,y) = \mid I_p(x,y) - I_n(x,y)\mid/d,$$

wherein d is a value utilized to quantize the contrast (e.g., d=30 in embodiments of the present invention). Moreover, a weighting function (designated as α) may be defined as follows:

$$\alpha(x,y) = \text{weight } (\text{diff}(x,y)) \, ,$$

where the weighting function may be implemented utilizing a look-up table (LUT) as depicted in FIGURE 3 in accordance with embodiments of the present invention. The values of the LUT may be tuned on an empirical basis.

[0028] Then, image mask 105 (designated as M(x,y)) is given by:

$$M(x,y) = \frac{(I_p(x,y) \cdot w_p(x,y) \cdot (1 - \alpha(x,y)) + I_n(x,y) \cdot w_n(x,y) \cdot \alpha(x,y))}{(w_p(x,y) \cdot (1 - \alpha(x,y)) + w_n(x,y) \cdot \alpha(x,y))}$$

where $w_p(x,y) = \sum_{(x,y) \in Np(x,y)} w(x - x_0, y - y_0)$ and $w_n(x,y) = \sum_{(x,y) \in Nn(x,y)} w(x - x_0, y - y_0)$.